

7th International Conference on Life Cycle Assessment in the Agri-Food Sector (LCA Food 2010), 22–24 September 2010, Bari (Italy)

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1 Overview of the event

The “International Conference on Life Cycle Assessment in the Agri-Food Sector” (<http://www.lcafood2010.uniba.it>) that has taken place from September 22 to September 24, 2010 in Bari (Italy)—LCA Food 2010, in short—is the seventh in a series of events that include Brussels in 1996 and 1998, Göteborg in 2001 and 2007, Horsens in 2003, and Zurich in 2008. All the previous editions have been successful in terms of both participation and scientific quality of the presented papers, thus really contributing to build a reputation as a reference event for the Food LCA scientific community. More than 270 participants coming from the four continents have joined the event in Bari. Therefore, this edition has shown the highest degree of participation registered so far within the LCA Food conference series (Figs. 1 and 2).

In organising this edition, the aim has been to keep the usual high scientific quality of the conference, while providing an occasion to involve the relevant stakeholders, including some key players from the agriculture, industry, and distribution sectors; the institutional bodies; and the households. This purpose has been achieved to the extent the event has received positive feedbacks from important economic actors, at both national and international level, that gave their support to the event as sponsor, as well as from the institutions that gave their patronage.

2 Motivation and objectives

The topics the conference dealt with are of great interest, since the contribution of the products in the food and drink sectors to the environmental impact of the private consumption has been estimated to be about 20–30% in the EU (IPTS-ETO 2006). Recently, the European Parliament in the Regulation (EC) No. 66 on the EU Ecolabel has extended the possibility of using the EU Ecolabel in all sectors for which environmental impact is a factor in consumer choice, by stating also that for food and feed product groups, a study should be undertaken to ensure that criteria are feasible and that added value can be guaranteed. To complete this framework, a call for tender titled “EU Ecolabel for food and feed products—feasibility study” (ENV.C.1/ETU/2010/0025) has been published recently. At the same time, in the Strategic Research Agenda 2006–2020, the European Technology Platforms Food for Life has defined sustainable food production as the most important challenge that will be faced by the European food industry. An outcome of this process is the recently published FP7 Call for 2011 under the theme Knowledge-Based Bio-Economy (KBBE/Food, Agriculture and Fisheries, and Biotechnology), especially KBBE.2011.2.5-01 environmental sustainability in the European food and drink chain.

In order to find the possible directions to sustainable food production and consumption, LCA has been applied for more than 15 years to agricultural and food systems, identifying their environmental impacts throughout their life cycle and supporting environmental decision making. A variety of databases and methodological approaches have been outlined over this period to support the applications of LCA to food systems.

Given the relevance of the topics mentioned above, the objectives of the conference have been:

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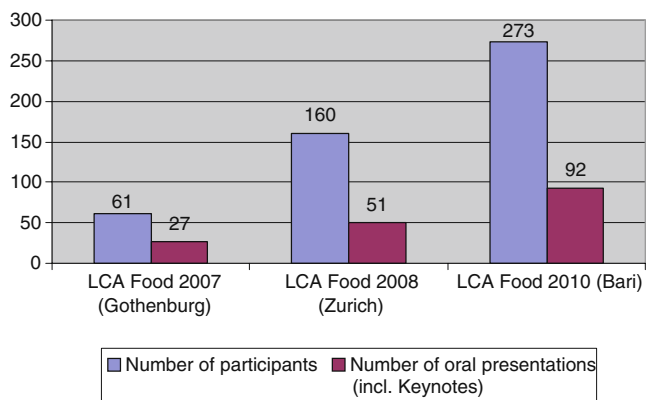


Fig. 1 Comparison among the last three editions of the LCA Food conference series in terms of number of participants and oral presentations

- To show the recent developments in the methodology, approaches, databases, and tools;
- To present applications of the LCA methodology to food product systems and to food consumption patterns;
- To increase the use of LCA and other industrial ecology tools in agricultural and industrial food products; and
- To support information sharing and exchange of experience regarding environmental conscious decision making in the agri-food chain.

3 Contents and outcomes of the conference

More than 200 works have been presented at the conference, after having been selected via a peer-review process by the 21 members of the International Scientific Committee, who are widely recognized scientists in the field of Food LCA.

Besides 6 keynote lectures, the selected papers have been classified as 86 platform and 114 poster presentations. Platform presentations have been structured in plenary and parallel sessions. The structure of the presentations and the topics dealt with in each session are shown in Table 1. The first plenary session has been dedicated to the keynotes, well-known scholars in the field of Food LCA who accepted the invitation to participate in the conference organisation.

The progresses registered thanks to the works presented either orally or as posters can be summarized as follows:

- Increasing relevance of carbon and water footprinting;
- Stronger integration of Food LCA with economic analysis, social performance, and optimization techniques;
- Active involvement of the agri-food sector: evidences and practical experiences from important industrial players;
- Many aspects related to the agri-food products: packaging, trade, ecodesign, and the alternative uses of land;

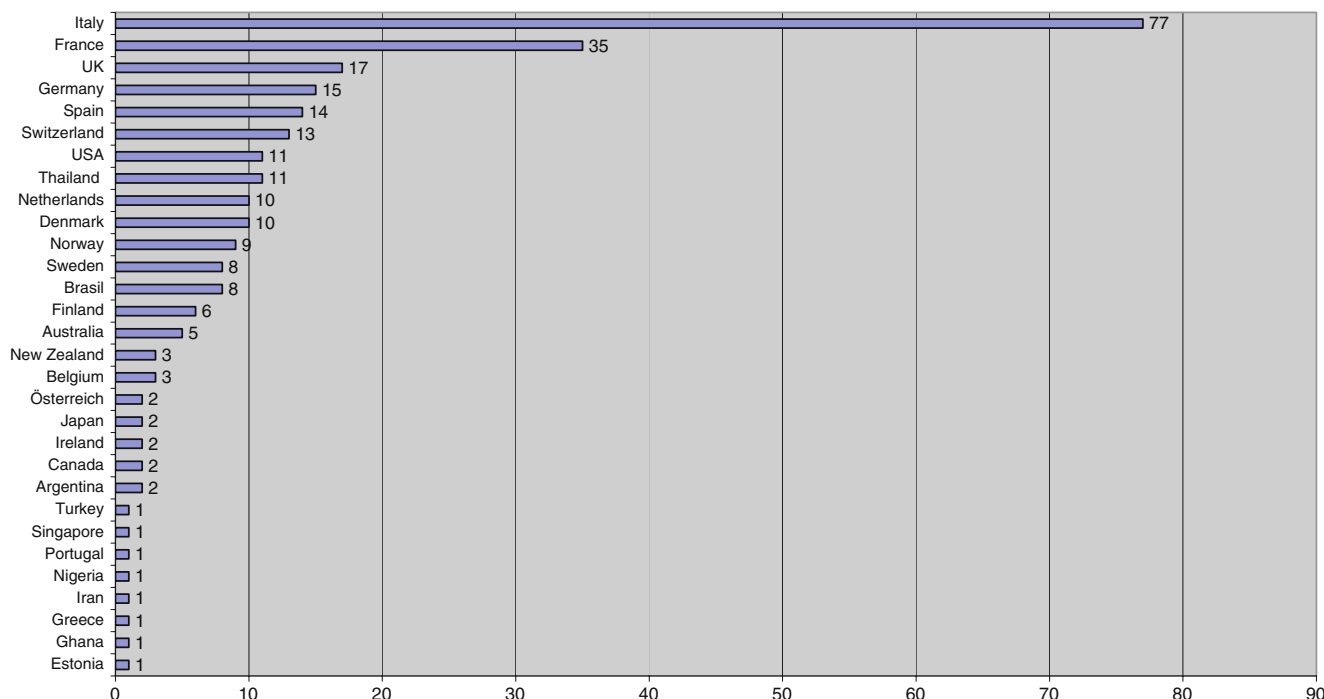


Fig. 2 Participants to the seventh edition by country of origins

Table 1 Structure of the event

September 22, 2010		
Plenary session 1		
Keynotes		
Parallel sessions 1		
Session 1a—Food-related sectors: packaging, biofuels, and ecodesign		1b—Issues in life cycle inventories and datasets
September 23, 2010		
Plenary session 2		
Issues in LCA and carbon/water footprinting		
Parallel sessions 2		
2a—LCA of milk and dairy systems	2b—LCA and footprinting	2c—Environmental, economic, and societal assessments in LCA
Plenary session 3		
Cross-topic issues in impact assessment		
Parallel sessions 3		
3a—Case studies on LCA and the agri-food industry (I): natural food ingredients	3b—Sustainable diets and households behaviour	3c—Water and land use in the primary sector
September 24, 2010		
Plenary session 4		
Methodology and applications of Food LCA: closing the gap		
Parallel sessions 4		
4a—Case studies on LCA and the agri-food industry (II): production, trade, and treatment processes	4b—Case studies on LCA and the agri-food industry (III): innovative processes and procedures	4c—Specific impact categories of the primary sector
Wrap up and closure session		

- Emphasis on the specific impacts of the primary sector: water use and land use, soil erosion, biodiversity, ecotoxicity;
- Increasing applications and experiences from non-European countries (Ghana, Cameroon, Thailand, New Zealand, etc.); and
- Latest trends in data sets and tools.

A book of proceedings made up of two volumes has been published (Notarnicola et al. 2010), the structure of which reflects how the event has been organised: Volume 1 includes all the papers presented orally, which have been organised according to the session, either plenary or parallel, in which they have been discussed. Also, the same volume includes the contributions from the distinguished keynote speakers coming from the institutions and from the academic field, which have been presented during the opening of the event. Volume 2 of the book of proceedings, instead, includes those papers that correspond to the posters that have been displayed throughout the duration of the conference. Also, volume 2 has been structured according to the topics discussed, since each poster presentation has been assigned to a specific session, as well.

Finally, the main event has been anticipated by several back-to-back scientific workshops that took place at the same venue. Each workshop has been autonomously

organised, although the synergies between the pre-events and the main event have been fully taken advantage of in terms of consistency of topics and engagement of the participants who reached Italy in those days. Namely, the pre-conference events included:

1. The Round Table on Organic Agriculture and Climate Change (RTOACC) International Expert Workshop on Applying Life Cycle Assessment to Organic Agriculture—methods, models and databases with focus on GHG emission and sequestration potential of organic farming systems and organic food (organised by ICROFS—the International Centre for Research in Organic Food Systems)
2. Ecoinvent version 3: workshop on new features and introduction to the ecoEditor with special reference to the agri-food sector (organised by Ecoinvent)
3. Carbon footprinting of food products according to draft ISO-14067—possibilities and limitations (Organized Østfold Research, Norway)
4. Calculating the sustainability in food production with GaBi 4.4 example: milk life cycle analysis (organised by PE International)
5. DevEX, an LCIA solution integrated with the new product development and innovation process (organised by Selerant Srl)

4 Conclusive remarks and future works

Ultimately, during this edition, an effort has been made to address all the key issues for future LCA research that have been outlined during the previous edition (Gaillard and Nemecek 2008):

- Explore the impacts of the primary sector, including land and water use;
- New methodological trends: footprinting;
- More integrated addressing of variability and uncertainty;
- Effort towards harmonising data and methodology;
- Enhance communication within and beyond LCA community; and
- Promote a larger involvement of non-European countries;

It is worth reporting some remarks that have risen during the closure session as a feedback from the participants towards the coming editions of the event:

- Moving the debate beyond the methodological issues, also including ethical aspects;
- Involve people from different sectors and countries, in order to address problems that are not known within the Food LCA community;
- More emphasis on food waste;

- Address the controversial point of supporting decision makers;
- Acknowledge the role of consumers and consumers organisations, especially in order to supply evidences through testing products; and
- Involve the industrial organisations and, more in general, the stakeholders.

As a final step, a selection of 15 papers among the platform presentations will be further reviewed and published on a special forthcoming issue of the Journal of Cleaner Production.

Much work is still to be done in this field, but an increasing emphasis on the topics of Food LCA is leading to the next edition that will take place in Rennes, France in 2012.

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